Barrier Wall Performance Monitoring

McCormick & Baxter

Monthly Progress

Meeting

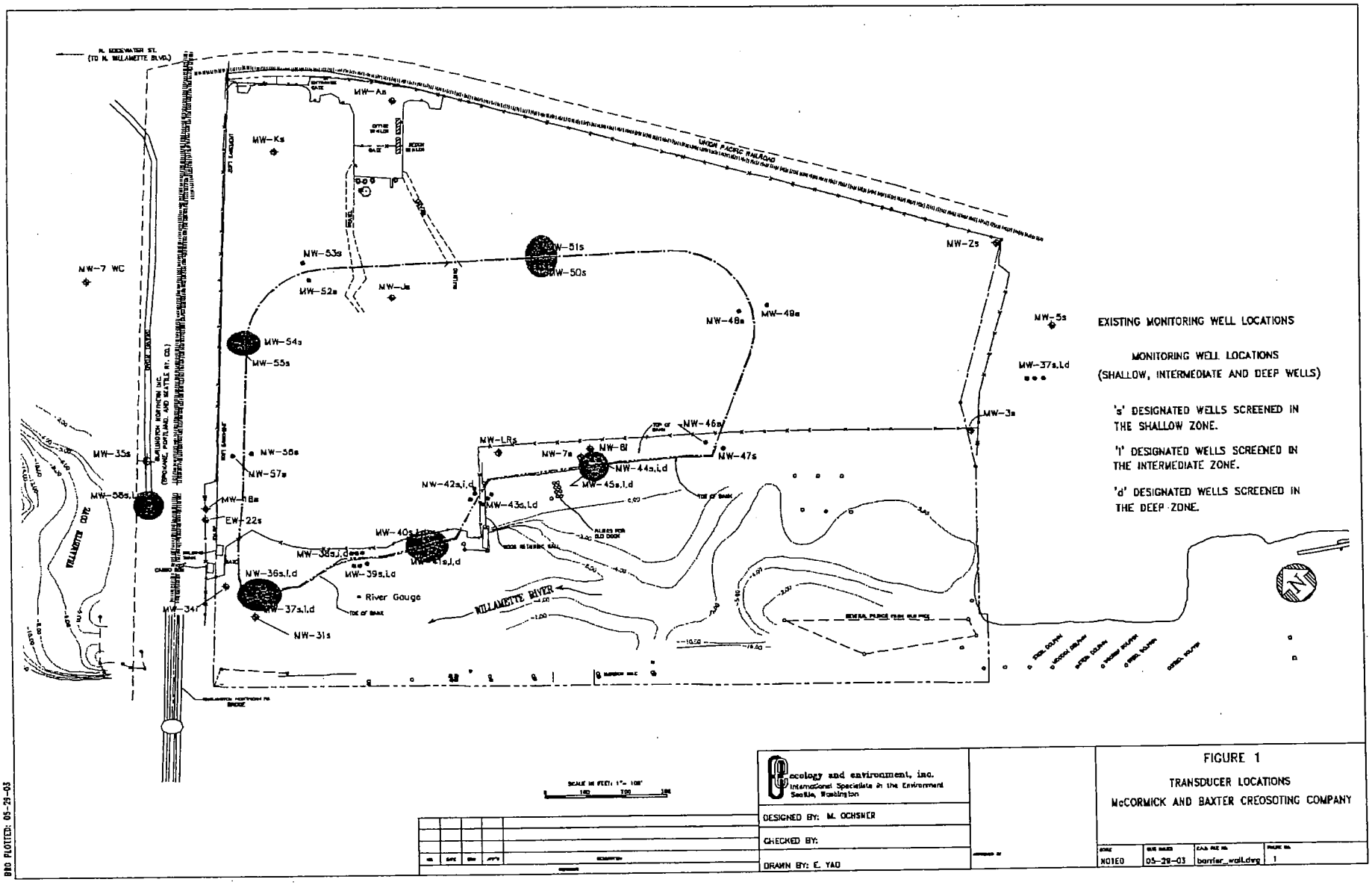
November 18, 2003

ecology and environment, inc.
International Specialists in the Environment

6.4

Overview

- 45 monitoring wells were installed inside and outside the Barrier Wall .
- Well clusters were installed along the riverfront and Willamette Cove (shallow, intermediate, deep).
- Well clusters screened at the same intervals.



BRD PLOTTED: 05-29-03

ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

DESIGNED BY: M. OCHSNER
CHECKED BY:
DRAWN BY: E. YAO

FIGURE 1
TRANSDUCER LOCATIONS
McCORMICK AND BAXTER CREOSOTING COMPANY

SCALE	DATE	CAD FILE NO.	PROJECT NO.
NOTED	05-28-03	barrier_wall.dwg	1

Continued…

- No product or sheen observed in riverfront wells during well development.
  - Heavy sheen was observed in MW-56s during well development;
  - Slight H.C. odor noticed in MW-36s
- 24 pressure transducers installed to collect continuous data across the site and in the Willamette Cove.

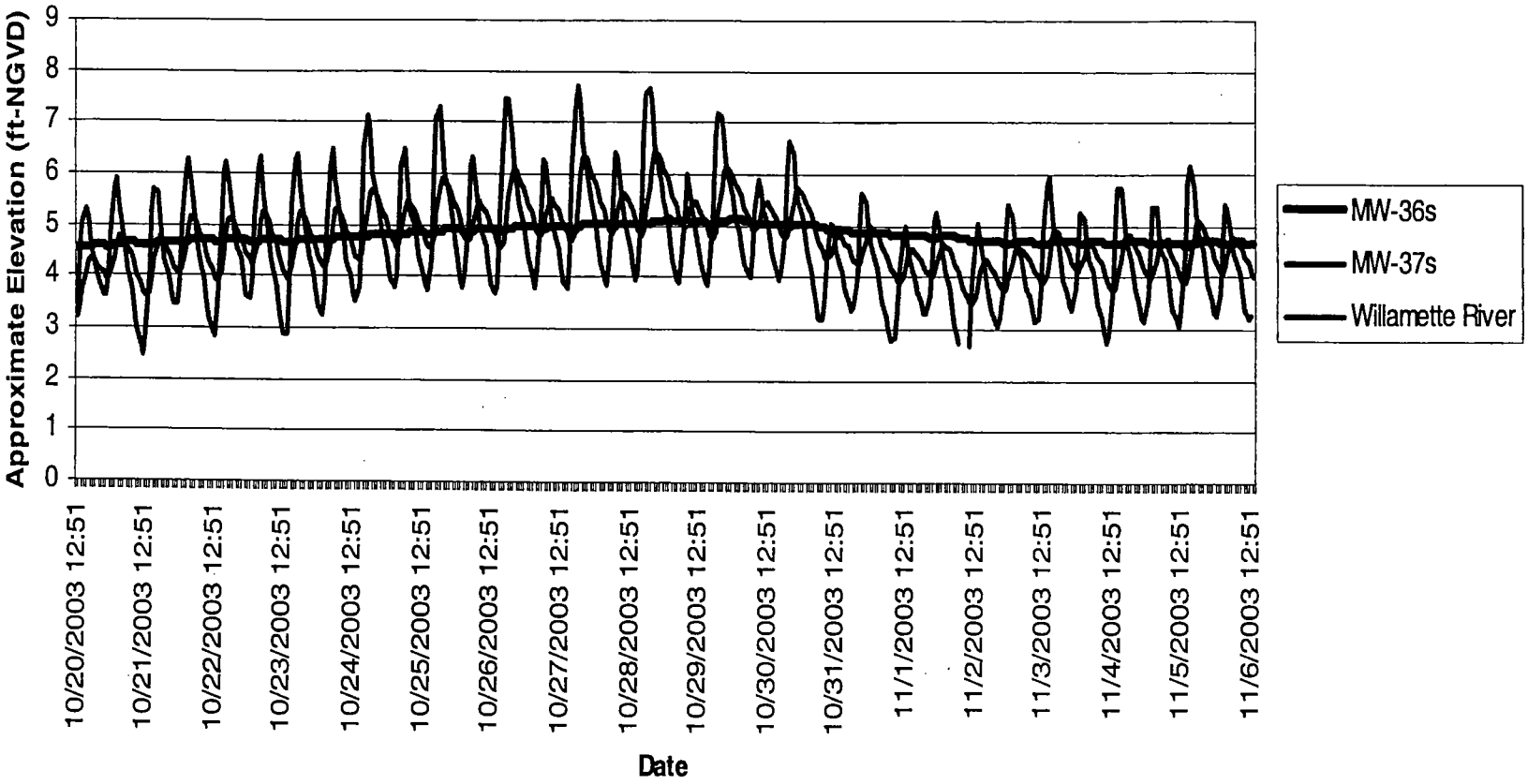
Continued...

- Data collected hourly for the first month (frequency will be reduced after one month).
  - Pressure transducers downloaded using a Palm Pilot at each well location.
  - Currently evaluating the use of radio transmitters to send real time data directly to a computer system.

DRAFT

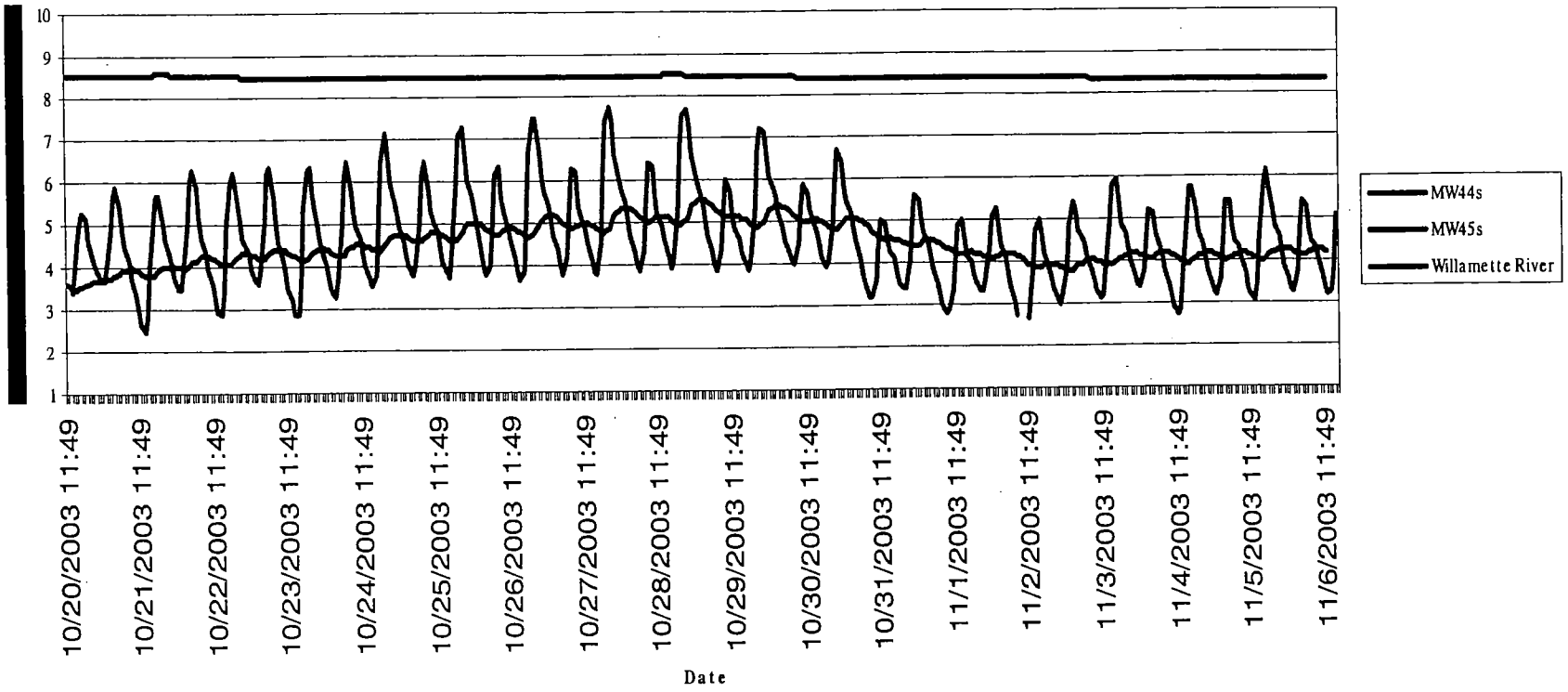
FWDA Shallow Groundwater Elevation

Inside the Barrier Wall vs Outside the Barrier Wall



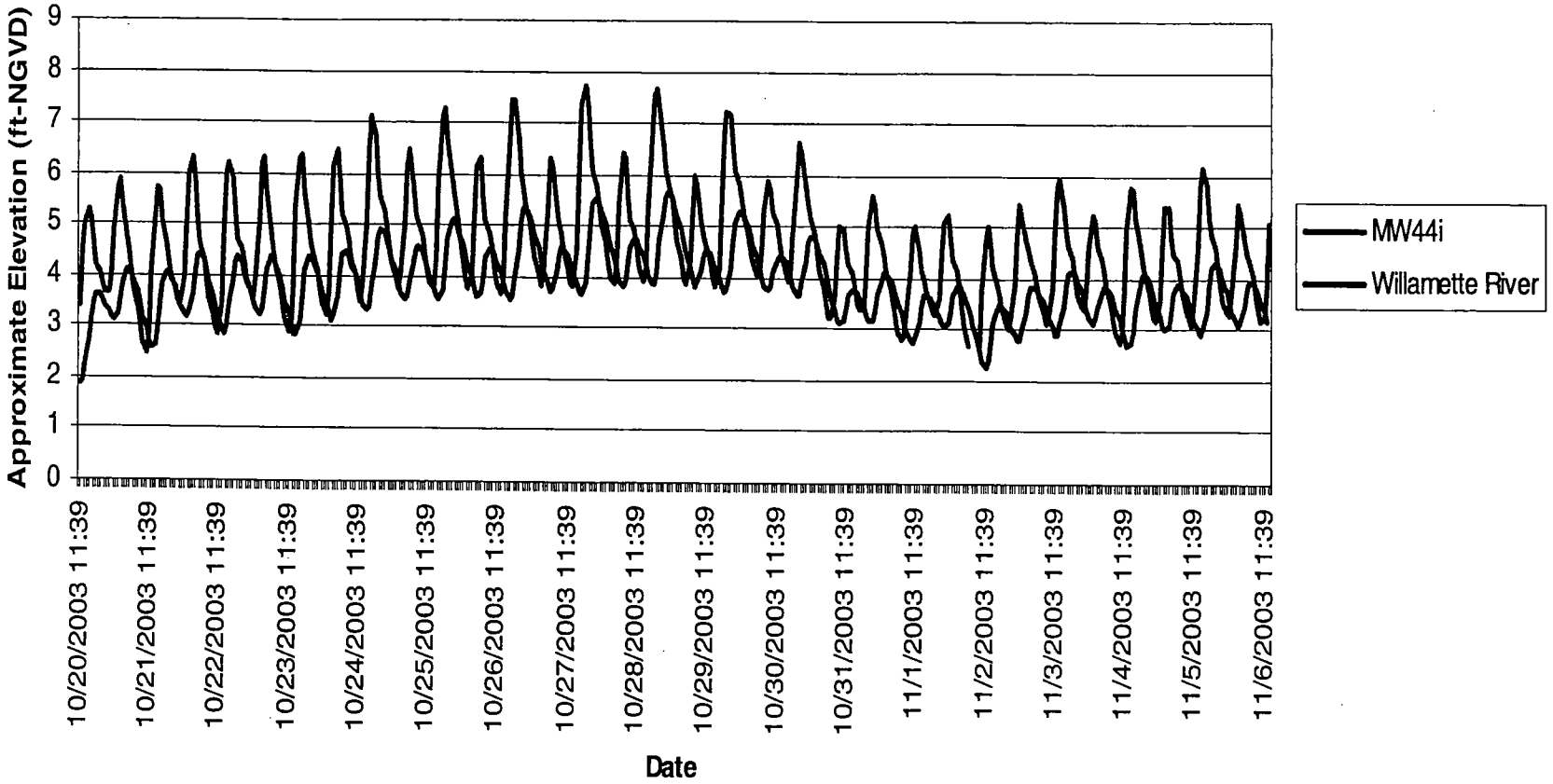
DRAFT

TFA Shallow Groundwater Elevation
Inside the Barrier Wall vs Outside the Barrier Wall



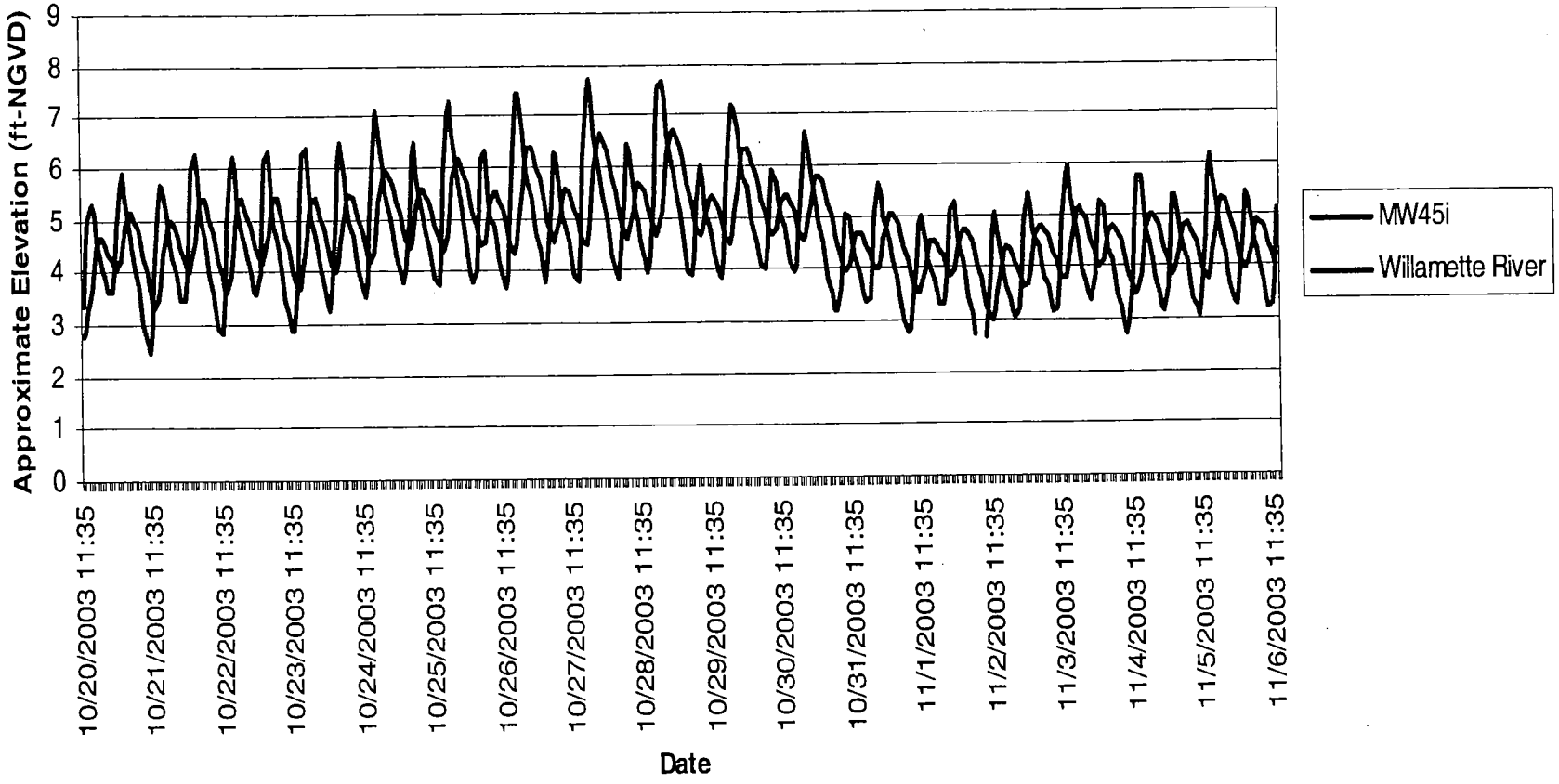
DRAFT

TFA Intermediate Groundwater Elevation
Inside the Barrier Wall vs the Willamette River



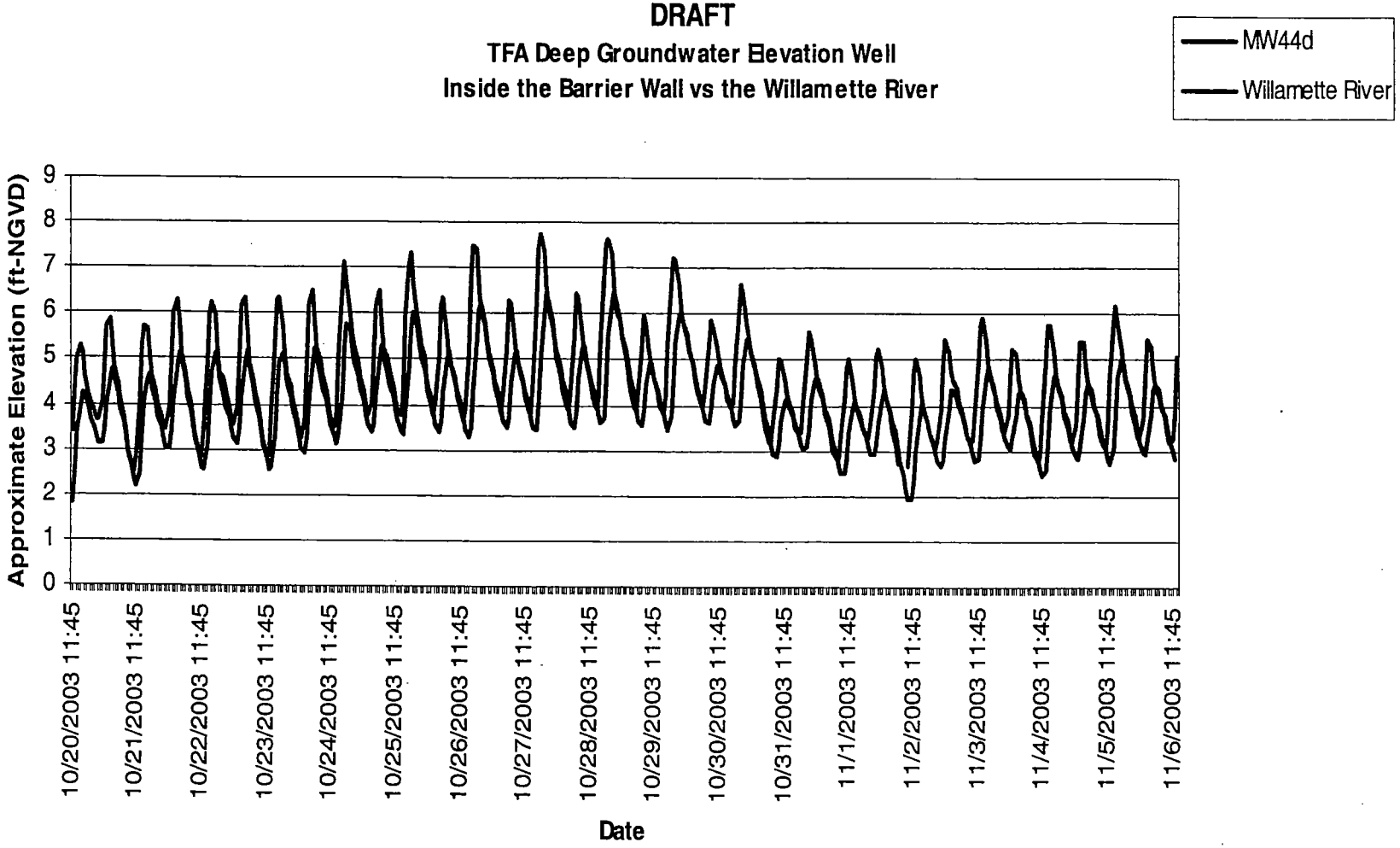
DRAFT

TFA Intermediate Groundwater Elevation
Inside the Barrier Wall vs the Willamette River



DRAFT

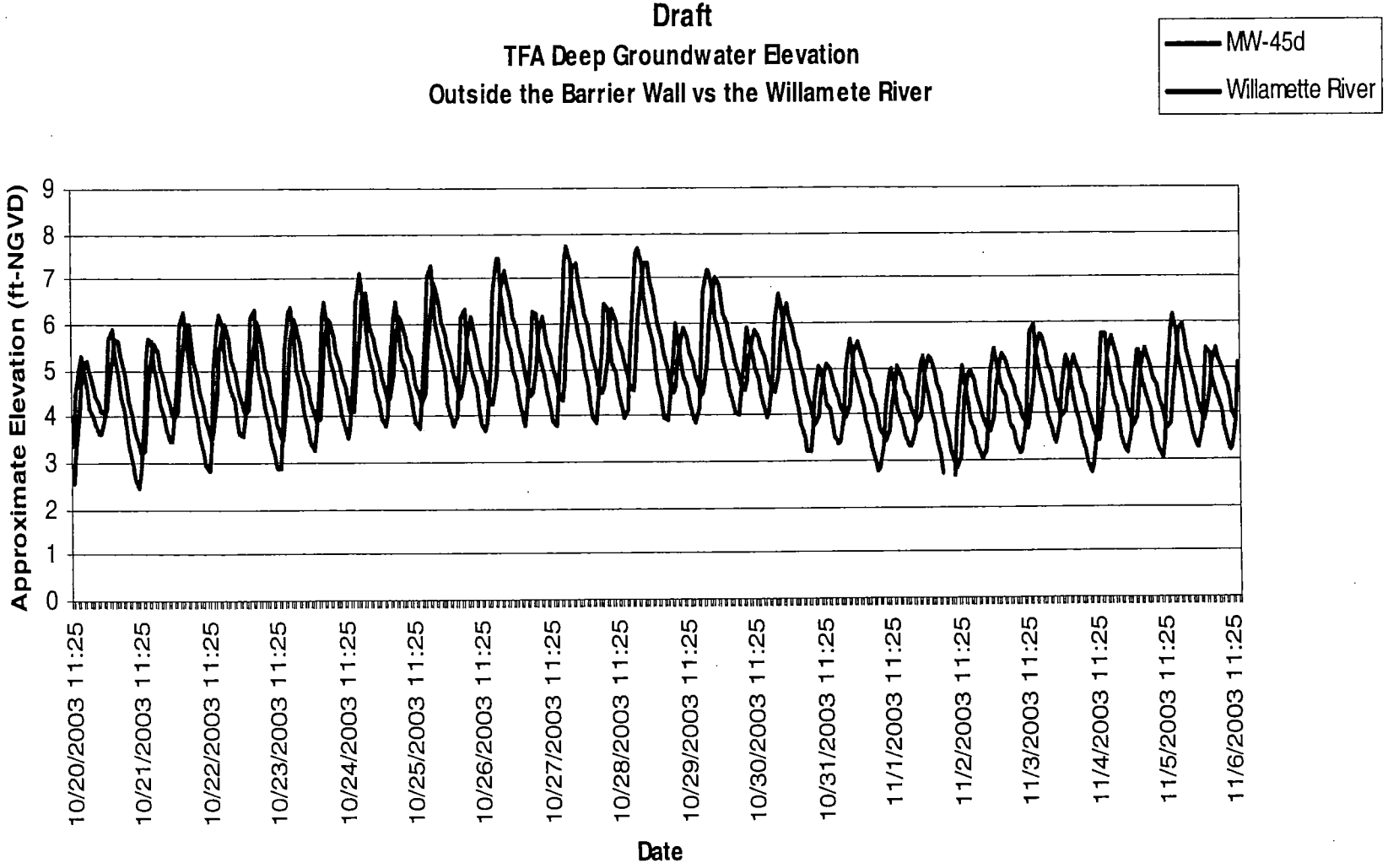
TFA Deep Groundwater Elevation Well
Inside the Barrier Wall vs the Willamette River



Draft

TFA Deep Groundwater Elevation

Outside the Barrier Wall vs the Willamete River



Preliminary Interpretations

- A strong hydraulic connection exists between s, i, d zones and river stage in wells located outside the barrier wall along the riverfront in the TFA and FWDA.
- Tidal influences on the shallow zone inside the wall are strongly dampened.
- In FWDA, downward vertical gradient on the inside and an upward gradient on the outside .

What's Next

- Complete the installation of the river transducer and radio transmitter.
- Continue to analyze groundwater data and present that data to the group in the Monthly meetings.
- Develop an outline and schedule for reporting.
- Complete evaluation of an automated groundwater collection vs. manual downloading at each well.